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The Principles of Psychology

by

William James

Published 1890

THE THERAPEUTIC IMPORTANCE OF PSYCHOLOGY.

BY ALEXANDER MORISON, M.D., F.R.C.P. EDIN.¹

London.

DR. CHRISTIE, in addressing you from this chair last year, very ably and lucidly laid before us the advances which had been made in therapeutic chemistry; and other presidents have dealt in an interesting and instructive manner with topics germane to our studies. With your indulgence, I propose this year leaving for the moment the purely physical domain of medicine—if indeed we can call anything purely physical in the ordinary sense—and considering for a short time the importance of the mind in relation to the body, both as a cause of disease and as a therapeutic agent.

It appears to me that the reaction from the ancient metaphysical view of medicine, like the revolt against blood-letting, has been carried too far. A system much abused has been practically ignored, to the temporary loss of whatever usefulness it contained. I say temporarily lost; for the recurring needs of man are sure to rediscover what has been really useful in the past, even though generations may ignore it or treat it with contempt.

The mind of man, fatigued with comparatively barren researches into its own nature, turned with relief from this subjective study to the more accessible scrutiny of external nature, and the more physical consideration of the human organism.

The enthusiasm begotten of successful research in this domain, such as the ever-memorable discovery of the circulation of the

¹ This paper is part of a Presidential Address to the Æsculapian Society, delivered on October 2, 1891.

blood by Harvey, the difference between the sensory and motor nerve-roots by Bell, and many other positive increments to our knowledge, on which we could place our finger and say, "this we know," was to a truth-seeking animal like man a mighty relief from the weary attitude of a seemingly eternal, "this we only think."

We cannot under these circumstances be surprised that, in the routine practice of medicine, the physician gradually came to consider that he had done his duty, as a rule, when he had punched, pummelled, and inspected the biped before him, and had asked him what he usually ate and drank.

There are, moreover, undoubted difficulties in the way of enquiry into the mental life of a patient, from the necessary limits of time, and the delicacy needed in treading upon ground which is sacred to any but one possessing the most sensitive tact. That, nevertheless, we do less than half our duty in many cases in not exploring this portion of the human organism is taught us by a no means uncommon experience.

Leaving out of consideration the phenomena of so-called "hypnotism," however they may be explained, and however objectionable or otherwise its use or abuse may be, as not necessary to our object, we must all have had some experience of conditions in which mental disturbance has upset the delicate balance of health, and mental repose has restored it.

A good deal has been written of late years on the injurious consequences of prolonged vascular tension due to physical causes. Is there no such state as prolonged mental tension due to moral causes? And are not the consequences of tension, whether due to physical or moral causes, in a measure the same, and both highly injurious? We can, given a fairly normal absence of aggravating mental circumstances, do much for a purely physical vascular tension, except in advanced stages of the causal disease, whether of heart, or liver, or kidney, or all combined. But is any physical agent known, which, in those whose reason is unimpaired, will relieve a tension due to moral causes, except the removal of that cause, or resignation to the burden it involves? Our greatest poet has touched upon this as upon most other important questions in moral philosophy, in words too familiar for quotation. No! there are no physical

agents or methods for the cure of this state of such frequent occurrence, and so baneful in its results. When such a condition ends fatally, it may be said of its victims, as Alfred Austin has well expressed it—"There is no name for that of which (they) died," and the material drug likely to have proved of service to them has also yet to be discovered.

If, then, there are none such, and the physician is to be of any service to his patient, it must be by the agency of mind acting upon mind; and this takes us out of the vestibule littered with microscopes, crucibles, and retorts, into that inner chamber—the holy of holies in the life of a physician and his patient—where a human heart and mind are capable of being laid bare to the sympathetic gaze of a fellow-man, whose discretion may be relied upon, and who may, from his training in the knowledge of the human soul, as well as the human body, be able to relieve or cure his brother of a disturbing factor in his life, beyond the reach alike of experimental physics and the most advanced therapeutics of a purely physical kind.

I do not for a moment desire to underrate the subsidiary and useful rôle which an enlightened regimen and careful therapeutics may play in building up a system broken down primarily by a moral ailment; but, however we may, by artificial means, soothe a nervous system in which a moral irritant is implanted, it requires only the subsidence of such artificial relief for the original cause to resume its persistently evil influence. Whereas a little judicious advice, a few common-sense friendly words, a modicum of sincere and unmercenary sympathy, may change the whole aspect of the situation, and render other treatment unnecessary. For example, a man of neurotic type consulted me on account of loss of appetite, restlessness, insomnia, and general loss of tone of a persistent character. I examined him carefully and found little amiss in his physical organisation to account for the continuance of his symptoms. I enquired with as much delicacy as possible into his mental state, and elicited the fact that he had abused the confidence of a brother who trusted him implicitly, and that he had transferred a considerable sum by way of commission on some commercial transaction from his brother's pocket to his own without the sanction of the former. I enquired whether he had any

remorse in consequence, and found this to be the secret of his distress. I advised him to send a cheque for the amount to which his brother was entitled, and frankly to state the circumstances. From force of habit, I presume, I likewise prescribed some bromide. He called upon me some time afterwards in perfect health, told me he had done as I suggested, and showed me a letter which he had received from his brother, couched in a tone of tender forgiveness, and entrusting him with fresh work on a remunerative basis. He refused the remuneration, however, and was only happy to have an occasion for acting more honourably.

Again, I was at one time frequently asked to visit a lady who was constantly having violent hysterical attacks, over which my usual remedies had little control. After I had known her some time, I learned, in the course of conversation, that her marriage had been arranged for her, and that in contracting it she had, as sometimes happens, given her hand to one man and her heart to another. Without shaking my head and holding up the finger of reproof, I talked a little common-sense to her, and soon found my patient required very little bromide. About ten years afterwards I had occasion to see her, and enquired casually whether she ever suffered from her former attacks. I was rather struck by her replying, "I have never had them since that conversation you held with me." There had been no great change in the domestic situation to account for this. She was childless, but lived contentedly with, and respected, the man she had been compelled to marry.

The influence of the mental life under morbid circumstances teaches the same great lesson of the intimate interdependence of mind and body. I knew an old lady who had at one time been confined in a lunatic asylum, but who had for many years afterwards been mentally sound. During this sane interval she suffered regularly every winter from febrile catarrhal and congestive conditions of the lung. I was summoned to her hastily one morning, and found she had had a syncopal attack. On recovering she had a scared appearance, and informed me that when she fainted she saw hell opened, with the classical accompaniments of torture, and knew that her final abode would be amid the unrestful torments of the eternally damned. She

rapidly sank into a condition of fixed melancholia—taciturn, grave, and in hopelessness awaiting her inevitable doom. I continued to attend her for some years, during which she passed with immunity through the seasons which had hitherto, with absolute regularity, produced the febrile catarrhal state to which I have referred.

A friend has also informed me of the case of a lady who suffered from organic heart disease, and who, in consequence of great and continued domestic distress due to the unfaithfulness of her husband, rapidly developed dropsy and was in imminent peril of death. At this crisis she lost her reason. The disturbing mental factor was completely eliminated, and the balance of the labouring circulation quickly righted itself, the patient soon being physically comfortable, although her reason was not restored.

I think it is Dr. Walshe who mentions the case of a man who presented himself for life insurance apparently in good health, and conscious of full vigour of body and mind, and who, on being rejected by the physician who examined him, and being informed that the cause of his rejection was organic disease of the heart, became dejected and out of health forthwith, and died suddenly within a week of his visit to the insurance office.

Such cases might be multiplied, both from our own experience and from that of the profession at large as chronicled in the literature of the subject. Even when, as in two of the cases instanced, there is a gross organic lesion requiring enlightened physical treatment, great may be the advantage to the physician who ever remembers that his patient is no mere hydrostatic machine or other mechanical apparatus, but a complex human organism, the acme and gathering point of all whose forces finds expression in that all-feeling and all-acting part of him or her, as the case may be, which with the general inadequacy of words, we call the "mind."

The study of mind, then, no less than that of the body, is within the domain, not of some physicians, but of all physicians and surgeons. It has doubtless been relegated as a speciality to the philosopher, the priest, and the psychiatrist or alienist. But, without desiring in any way to detract from the dignity and importance of all these callings (and the last mentioned is

of course that of a specialist who is also a physician), when the right man is in the right place, on the principle that no secure specialism can be founded on anything except a solid generalism; and as the moral philosopher and priest are not *usually* physicians, and the mind is *always* intimately associated with the body, some knowledge of the latter, in health and in disease, appears to be a necessary preliminary to a sound and rational attitude towards humanity, both on the part of philosophers and priests. The doctor has of late had a good deal to say by way of enlightenment to both these; and, moreover, from his relation to his patient, there are confessions poured into the ear of the physician which never reach the confessional, and throw upon him the part of the consoler as well as the healer, under circumstances in which he, from his special position and training, can frequently "minister to a mind diseased," with greater prospect of success than one who is primarily an ecclesiastic and only sometimes a psychologist.

Do not misunderstand me: the philosopher, theological or otherwise, has a great science to cultivate, and one fraught with help and comfort to humanity. Philosophy, theology, and medicine touch each other to-day as they have ever done and will ever do; but there is a transition ground which is common to all, and on this the physician, throwing aside the grosser accoutrements of his calling, stands with as much authority in consequence of his relation to his patient as ever priest did to suppliant.

For this reason, I think that it would be only just if the secrets of the consulting-room were regarded as equally inviolable with those of the confessional, and that the physician no more than the priest should be compelled to reveal them in a court of law. The abuse, however, of such a position, did it exist, could scarcely be adequately punished except—I had almost said by death—but would rather say by some deterrent short of that.

As an example of the more purely ideal treatment of disease—of the place of psychology in medicine—let me instance the case of mental disorder, or of diseased conditions originated and maintained by erroneous ideas on the part of patients, such as is frequently the case in hysteria and hypochondriasis.

The study of these conditions teaches us that, in many cases.

the first discoverable fact in a vicious train of circumstances is that a certain idea is entertained, and influences conduct. How are we to determine whether such an idea is rational, healthy, and sane, or irrational and insane? First, to be rational it must be based on *realities*, that is, things, circumstances, effects, common to all human experience. Second, it must not, even when it contains a germ of truth, of reality, be distorted by the imagination, that is, have other fantastic and unreal or incoherent ideas encrusted upon it—ideas opposed to common experience or doing violence to the common deductive or inductive faculty of man. A fact may of course be extraordinary and nevertheless a fact, a reality; but, if so, the proofs of such must be ordinary, or capable of appealing to the reason of all.

Sane ideas are thus a reflex of realities, insane ideas either devoid of reality, or such that in them the real is more or less obscured by the unreal, which renders the idea as a whole incoherent. An erroneous or insane idea may be corrected in a mind capable of reasoning by the elimination of the unreal elements. When the mind of an individual is incapable of performing this operation and the erroneous notion becomes a fixed idea, and is regarded by the patient as a normal notion, that individual must be regarded as insane. When the physician finds he cannot, by argument, remove the erroneous elements in an insane idea, he must of course endeavour to promote the *corpus sanum* before he can hope to restore the *mens sana*. But, given as high a level of health of body as is possible to the individual harbouring an erroneous idea, one must endeavour to discover, by a careful examination of all those experiences which go to make up the mind of the affected person, when and how the germ of reality—if any—in a fantastic idea arose, and whence the erroneous accretions upon it originated, or how they are composed. When erroneous ideas are of purely mundane origin, great success may attend an effort to remove them by an appeal to reason.

When, however, in the opinion of the patient, his erroneous ideas have a supernatural sanction, success is much less certain. This is proved by the well-known obstinacy of the delusions of religious maniacs, of which I have already mentioned an instance. Even when this is the case, however, persistent efforts

to emphasise what is erroneous in the mundane portion of such a delusion may assist in removing the idea of reality which the patient entertains of the supernatural portion. It is assuredly only thus that erroneous notions, whether entertained by those generally of sound mind or in the case of the insane, can be rationally encountered. It is well known that if the brain-tracks leading to an idea, whether sane or erroneous, be sufficiently disused, such ideas tend to fade from the memory and disappear. In the absence therefore of success by direct appeals to reason, it is the duty of the physician, while giving all heed to the condition of the body, to inculcate the administration (so to speak) of such conduct to the patient, and the suggestion of such ideas, as will tend by their presence to divert the persistent direction of the mind of the patient from his or her false notion, or fixed erroneous idea. Sleep, if defective, must be procured at night, and occupations and suggestions diametrically opposed to the erroneous train of thought inculcated and induced while awake.

These principles will not, I think, be called in question, but putting them into practice has, I also think, so far proved beyond the power of physicians as a rule, by reason of their already multifarious duties. Excluding cases hopeless from the accompaniment of gross nervous disease, I cannot help thinking that much of the want of success in the treatment of mental diseases, and the persistence of hypochondriacal notions, is due to the difficulty of applying these principles with sufficient persistency. The initial stages of all disorders are of course the most amenable to treatment, and it is I think admitted by specialists in mental disease, that the family physician, who usually comes first into contact with the patient developing insane ideas, has the greatest opportunities, and ought to have the greatest power of benefiting such cases. His blue pill may be very useful under these circumstances; but his reason and the ingenuity he manifests in encountering false notions, and in cutting off the avenues to them, will be the most powerful remedial agents he possesses.

Apart however from any hysterical or hypochondriacal conditions, there are normal consequences of natural emotions which deteriorate the healthful actions of the organs of life, and

for the diagnosis of which, in some cases, the physician has to trust rather to a scrutiny of the face of his patient than to an examination of his organs; although a correct deciphering of the one must be in harmony with the conditions of the other, and the modern physician will be guided by the testimony of both, rather than by the evidence of one. The organs may, however, to our present knowledge be sound, and yet the patient ill. In such cases, mental cross-examination may give us the clue to the case, but we cannot in all cases reach the secret even thus. Here the face may guide us, "For," as Sir Thomas Browne has remarked, "there are mystically in our faces certain characters, which carry in them the motto of our souls, wherein he that cannot read A B C may read our natures." (*Religio Medici*, p. 94. ed. 1881.) A relative and namesake of mine, in a past generation, wrote a treatise on the physiognomy of mental diseases which was deemed worthy of foreign translation, and it would be my ambition, were I capable of it, to supplement his work by another on the diagnostic significance of the face in functional disorders, and in those of sound mind. If any Æsculapian feels impelled to undertake the task, and adequately performs it, I feel certain he will confer a benefit not only on his profession, but also upon himself, by the quickening of his perceptions, and the widening of his sympathies, which cannot fail to be the outcome of a careful study of the subject.

All degrees of facial and organic correlation may be met with, from the first cloud which casts its shadow into the clear depths of a pure nature, to the wreck of all the powers of life which has been concisely termed a "broken heart." I have heard a man, of some celebrity in his day, waste a considerable portion of a lecture in making merry with this term, and demonstrating its physiological absurdity. He was however a crass stethoscopist who required a heart to whistle like a gale through its valves to convince him of its abnormality. The physiological disturbances of a *Mignon* were beyond his comprehension. He would have told *Mignon* there was nothing the matter with her, even had she, undeterred by his unsympathetic personality, as she probably would have been, said—

"Fain would I lay before thee all my thoughts,
But a stern fate decrees it cannot be.

* * * * *

“ Each in the arms of friendship may seek rest,
 There may his soul find utterance and be healed ;
 But a great vow seals up my quivering lips,
 A God alone can bid them be unsealed.”

In the prescription moreover of the cruder expedients for the relief of such conditions, such as change of scene, it would be well if the physician could always select such situations as from their form, colour, and suggestiveness were suitable to the case, besides being appropriate from their climatic peculiarities. To do so with intelligence would require not only the calm reason of the philosopher and physician, but also the soul of a poet, and the topographical knowledge of a guide—a combination not easily met with, and only to be approximately attained if due weight be given to psychology in the practice of medicine.

This is perhaps scarcely the occasion on which to enter, with adequate fulness, upon a subject which has exercised the ingenuity of men since the dawn of thought, namely, the relation of mind, spirit, or thinking force, to matter. As physicians, we cannot be satisfied with the purely subjective speculations of metaphysicians; nor is it enough for us to ignore the question, by adopting the amusing attitude, in which however there is an element of truth, of the humourist philosopher, who to the question “What is mind?” answers “No matter,” and to “What is matter?” “Never mind!” For us nothing can consist of nothing—*ex nihilo nihil fit*, and everything that exists must be some *where*. If then mind exists (and that will not I think be denied), it must consist of some *thing*, and be some *where*, whether we can localise it or not. Let us be warned, however, in any attempt at localisation by the ever memorable example of Descartes, who to his apparent satisfaction placed the soul in the pineal gland! In his *Passions de l'Âme*, after pointing out that there is a small gland (*une certaine glande fort petite*) at the base of the brain, where the soul exercises its functions more particularly than in other parts, he assigns as his reason for selecting this as its seat the fact of its being “the only single organ in the brain; all other parts being duplicate; and as we have but one single and simple thought concerning anything at one time, it must needs be that there is a spot at which the double impressions coming

through the double organs should meet before they can as a single thought reach the soul." What Descartes would have thought of the assertion of a later poet that a man may have two souls, I cannot say.¹ Possibly the honour conferred on the pineal gland might have been transferred to the olivary bodies. Descartes' scientific method, however, and his acute analysis of the passions, cannot be treated with too great respect by us as physicians.

The subjective speculations of metaphysicians, and the material researches of physicists, however plausible or otherwise the half truths or whole errors they enunciate, have led hitherto to no satisfactory conclusion as to the nature and locality of mind, and it is to be feared that the organ, state, or condition which can entertain the idea of the Absolute and Infinite will never be absolutely disclosed to finite man.

The circumscribed "body" is said by metaphysicians to be "extended" in space, and the indefinable mind to be "unextended," which does not appear to afford much information. The metaphysician, untrammelled by matter, causes it to exist everywhere, and the schoolmen seriously considered what became of the mind resident in an amputated limb. The cruder materialist attempts to find a place for it in the brain-cells. Originality, in short, in such a matter is impossible; for every possible and impossible hypothesis seems at one time or another, by some one or another, to have been suggested, only on further consideration to be regarded as untenable.

Inasmuch, however, as the mind of each of us is as distinct as our bodies, and although intangible and imponderable, like force in general, not unmeasurable, it must be said to have at least a relative extension in space, relative, that is, to the minds of others than ourselves, and to some whole which contains our own and every other mind, human and sub-human; while its intimate relation to matter—to our bodies—is proved by an endless

¹ "Zwei Seelen wohnen, ach! in meiner Brust,
Die Eine will sich von der Andern trennen;
Die Eine hält in derber Liebeslust
Sich an die Welt mit klanimerenden Organen;
Die Andre hebt gewaltsam sich vom Dust
Zu den Gefilden hoher Ahnen."—*Faust*, Part I.

series of common sensations. The pleasure that thrills us, the sorrow that pains, may be provoked merely by ideas suggested to us by another—by mind acting upon mind and modifying our physical being—by the association of ideas grouping themselves coherently according to law, through a series of memory-reflexes, so to speak, in the store-house of our thoughts. That our thoughts are but the outcome of our perceptions—that we are, as Goethe has remarked, the creatures which our senses make of us—does not appear to me to disprove the existence of a sphere related to, but not actually implanted in, our nervous system. It seems to me that a closer study of so-called functional disorders, especially with emotional accompaniments, might be fruitful of some results in clearing up, at least, the relation of mind to matter.

The agitation and disquiet of apprehension or unrest may cause certain definite phenomena which the physician may detect and describe. The all-pervading calm of apprehension removed may likewise abolish such phenomena. *Cessante causâ, cessat et effectus*. Are we in such cases dealing with the molecular agitation of brain-cells?—call it electro-physical with Dr. C. B. Radcliffe if you choose; or is it a communicated agitation from a sphere in which ideas as apart from the nervous system exist? Involuntarily we perceive ourselves being drawn into the vortex of that *argumentum in circulo* which has been the despair of speculators on the subject in all ages. Let us endeavour to avoid this.

Take a case of cerebral irritation from mental causes, with peripheral manifestations. There can be no doubt that the latter might in some cases be temporarily removed by placing the brain-cells out of action by a powerful sedative, and permanently by shaving off the grey matter of the hemispheres as in the well-known pigeon experiment. If, however, these can be likewise removed by a withdrawal of the cause of disturbance in the sphere of ideas—in the moral sphere—without any *such* material interference, is the mind so *immediately* connected with the body as to be, although imponderable, a purely physical product of brain—a series of nerve-growths at cell-junctions as Professor Bain suggests? Or has it, so to speak, a germinative power of its *own*, whereby ideas multiply without further

influence from without; without, that is, the aid of fresh increments to the memory, begotten by the perception of external objects, or fresh stimulation from without of the elements of memory already in existence?

Bain's view is difficult to maintain in face of the fact admitted by him (*Mind and Body*), that such nervous growths are apt under certain circumstances to disappear; and that the stored ideas with regard to some subjects, perhaps any subject, if left unused, fade and vanish like the transient image on the retina.

If then these mental growths are so transient, is it not more feasible to regard cells and cell-junctions, as well as nerve-fibres, rather as the rails and points along which trains of thought travel than as the permanent *seat* of such. Physical indeed, in the same sense as rails, they may be; nay, possibly in some measure composed, like all the rest of nature, of the same materials, but in such combination as to render them quite a distinct form of matter, *but none the less matter*. Ideas, like the rails they run upon, may be more or less liable to metamorphosis and disappearance, or they may not be so perishable; but with this question we are not at present concerned.

My suggestion is, that ideas are extrinsic to nerve-matter, but capable of influencing it and being influenced by it, and capable likewise of co-ordination and combination, through the medium of the grosser nervous system, which plays rather the part of accomplishing than of originating such combinations.

Although I do not know whose ideas I am plagiarising in so expressing myself, I have no doubt that there is no originality in my suggestion. The malaise caused by a disordered liver due to a debauch may render one very miserable. Again, misery due to mental causes may so sap our reserve energy as to disorder our liver and all else. Moreover, what hepatic stimulants or careful diet and regimen may fail to accomplish, the joy of a glad heart may effect in a very short time. It is related of Baron von Stein, the liberator of Germany from the yoke of Napoleon, that he developed an inveterate attack of gout on being dismissed from office, and that, although he drank the waters of Ems with assiduity, and tried to oust his constitutional enemy by all means within his power, he failed

miserably to do so. In this sad plight he was unexpectedly and under very flattering circumstances summoned again to the counsels of his sovereign, and within an incredibly short space of time found all the sluggish processes of his body yield to the joy and joy-begotten vigour of his mind.

It is also related that during a prolonged siege in the Low Countries, the Dutch troops were being decimated by scurvy in consequence of the lack of provisions and the general hardships of the situation, and that coloured water served out to the troops by the orders of the Prince of Orange, as an infallible specific for the scourge, materially mitigated the evil, and infused fresh vigour into the troops. Again, if I may, without wounding the susceptibilities of any present, cite a still more ancient instance, I would mention the brazen serpent which the Hebrew prophet was induced to erect on a standard in the wilderness of Zin, to infuse courage into the panic-stricken and snake-bitten camp of the Israelites. We are informed that those who had been bitten and looked upon the serpent were healed. Many it is highly probable were.

To how many millions exercising the same faith since the Christian era has not the symbolical application of this incident to the person of our Saviour brought consolation, courage, and renewed vigour under diverse circumstances. Such effects are proportionate to their cause and a measure of their proximate cause, namely, the honesty of the belief of those in whom the effects are manifested. For whatever the ultimate cause, *primum mobile*, or force at the heart of things, whether, like Faust,¹ we find consolation in regarding it as an Act, a Fact, or prefer to look beyond the Act to an Actor-auctor, it has been well said that a chain is just as strong and no stronger than its weakest link, and in the chain of cause and effect in this connexion the condition and attitude of the mind of the individual influenced is a most important link.

What the resumption of his portfolio did for Stein, a glimpse of the Holy Coat or some other relic has done for many a pious devotee; and what these have done for them, hope and the mental quietude of an assured faith have done for many others:

¹ Mir hilft der Geist! Auf einmal seh' ich Rath
Und schreib' getrost: im Anfang war die That.

to the efficacy of these no greater testimony could be borne than the fact, that the active commercial spirit of the irrepressible Briton, and indeed of other "peculiar people," has discovered "Faith-healing" to be a very profitable business.

From all which I think we may gather, that however different the conditions of mind and body, and however difficult the demarcation of their respective boundaries, and whatever hypothesis we may form of the composition and nature of the force we term "mind," we are dealing, as Professor Bain says, with two properties of but *one substance*; and that the microcosm man is thus but the miniature reproduction of an all-embracing, sentient, and material macrocosm; a cosmos which is driven by the Mind in it, as our bodies are by the minds in them. We can, however, no more *exactly* localise the mind, which has so universal an influence over the body, than we can localise the Divinity which pervades nature; although the Cartesian localisation of the soul in the pineal gland has had its counterpart in the endeavour on the part of some astronomical theologians to centre the Divine in a star in the Pleiades!

Where the mind exists, however, or what its precise nature, is of much less importance to the physician than the undeniable fact that it *does* exist, and is very potent for good or for evil in every case which comes before us. As a force in operation it may be studied by its manifestations and effects, as objectively as any other natural phenomenon, and by the Baconian law of obedience to its normal exercise, it may be tethered like all other forces for the service of man.

In conclusion, while I am aware that he who excuses himself frequently at the same time accuses himself, I trust any remarks I have made will suggest to none that I wish to pose as a metaphysical reactionary against that scientific method, which has been so fruitful of results in building up the *New Atlantis* which Francis Bacon sketched in his classical treatise, and which has been more than realised by that "New Learning" which was but initiated when he wrote; which has grown in power and authority with the ages; and to which belongs the future. I will go even farther, and state my conviction that a metaphysical bias is a danger to the physician, unless jealously restrained by a cultivated habit of close objective observation.

However tedious it may be in the words of Robert Burns to "climb Parnassus pechin'," it is much safer to do so than to trip lightly along the edge of a precipice with one's head in the clouds. Many an exquisite theory may collapse ignominiously on the discovery of a very little fact, itself inviting discovery it may be, but only to be found by a plodding survey of the matter under examination.

Controlled by the faculty of objective observation, the metaphysical element in the mind may render the intellect like the weapon of Fitz James, at once a sword and shield, more penetrating and exact than the same instrument endowed with too great a preponderance of the one or the other quality.

Having said so much, however, I cannot altogether plead innocence from the conviction that physical research has tended to materialise (in the cruder sense of that elastic term) our perceptions, and has caused us, for example, in the preparation of a patient for operation, to overlook, in some measure, the mental sustenance so necessary to the accumulation of a reserve of force; and in the after-treatment of the case to undervalue the assistance which may be afforded us by fostering sedulously the lively emotions of hope and confidence. Yea, even up to the very gates of death, I maintain that a sanguine cheerfulness, and a hopeful expectation, are infinitely more useful and more warrantable on the part of the physician than a brutal candour, which may quickly cut the slender thread which holds the vital powers together; or than a pessimism which is apt at once to warp the ingenuity of the physician, and to affect the well-being of the patient.

Far from undervaluing the scientific method, I would only plead that the mental attitude of the patient should be studied as carefully as his organs and secretions, and as all life is but a struggle with death, that the powerful stimulus of hope, and the strength of mental composure, should be as possible of inspiration by the educated physician, as the prescription of more ponderable remedies.

This it appears to me is possible in greater or less degree to all of us, in whatever department of practice our work lies; but to none is it more so, as I have already hinted, than to the family physician, whose longer acquaintance with many of his

clients causes him to pass through the sunshine as well as the shadow of their lives, and constitutes him the friend and adviser in many contingencies in which the mere organs of vegetative life need no attention.

Such an experience, united to the confidence inspired by an intelligent performance of the more technical duties of his calling, gives him a moral leverage in the treatment of disease, which may in some cases constitute all the difference between success and failure, between life and death; or, what is of still greater moment, between the possession of the God-like faculty of reason and the loss of that most precious property. For as a great metaphysician has remarked, "Man is the only thing noble in creation, but *mind* the only thing noble in man."





